

AMENDMENTS TO THE CLAIMS

This listing of claims will replace all prior versions, and listings, of claims in the application.

Listing of Claims

1. (Currently Amended) A method of shaping a piezoelectric material, comprising the steps of:

depositing a resist mask on a surface of a piezoelectric material;

reforming the resist mask to a predetermined thickness profile, wherein the thickness profile is given to the resist mask by exposing the resist mask to a light source under the condition that the resist mask is irradiated with a smaller quantity of light at its periphery than at its center and developing the irradiated resist mask; and

dry etching the piezoelectric material together with the resist mask, wherein the piezoelectric material and the resist mask are etched at an etching rate different from each other, thereby shaping the surface of the piezoelectric material to a three-dimensional configuration corresponding to the thickness profile of the resist mask.

2. (Canceled)

3. (Canceled)

4. (Previously Presented) The method defined in claim 1, wherein the dry etching is started with a less selectively reactive gas for reforming the resist mask to a predetermined thickness profile and then continued with an etching gas having high selective reactivity to the piezoelectric material.

5. (Previously Presented) The method defined in claim 1, further comprising the step of depositing a film on the surface of the piezoelectric material prior to depositing the resist mask.

6. (New) A method of shaping a piezoelectric material, comprising:
providing a substrate formed of piezoelectric material;
applying a photoresist film onto the substrate;
exposing the photoresist film to a light under the condition that the photoresist film is irradiated with a smaller quantity of light at its periphery than at its center;
developing the irradiated photoresist film to form a resist mask having a thickness profile wherein the resist mask is thicker at its center and gradually becomes thinner toward its periphery; and
dry etching the substrate together with the resist mask, thereby shaping the surface of the piezoelectric material substrate to a three-dimensional configuration corresponding to the thickness profile of the resist mask.